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## Sustainable Development of Historic Cities: Rediscovering Madrid's Urban Facade from Its River

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### Abstract

Urban planning related to historic cities should take into consideration sustainability and visibility criteria. But this is not always the case, as quick profit as main economic development criteria for important urban interventions modify sometimes historic structures that cannot be recovered afterwards. The purpose of the research presented in this paper is a critical analysis of some of these transformations of Madrid's urban façade, to understand why these sustainability and visibility criteria are necessary in urban planning of such cities.

The image of European cities, since medieval times to 19th Century, has being related to paintings or drawings representing them from a distance. But the extensions of the cities and some motorways around them, have transformed and sometimes completely destroyed these views, were the main public buildings and institutions of the city were clearly visible. This has been the case in Madrid with some of the infrastructures done in 20th Century, such as the M-30 motorway. The partial resolution of a traffic problem has created deterioration in the perception of the city, for both its citizens and the visitors coming from abroad. A series of recent and expensive projects has recovered in the beginning of the 21st Century this urban façade; but the high amount of resources involved made it controversial. The main result presented in the paper is related with the costs which are not so easy to value when dealing with such interventions, related to the "visibility" or the "image" of the city. Some of its conclusions and proposals, link the evolution of this urban façade to what could be done in Madrid - and also in other cities - to introduce parameters such as "historic perception of the city" or "urban façade impact" when considering projects that can transform it.

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## 1. Introduction: Urban planning and historic cities

Facing everyday problems in a big city may let us forget that we give more importance to the historic spaces where we live than we are aware of. As written by Le Corbusier, “the city is a powerful image that activates our mind” (*“La ville est une image puissante qui actionne notre esprit”*). [1]

When we look for “the image of a city”, most of the times it is a space, near the main façade of a building or another construction, around a statue or fountain which has a special meaning for its citizens. Sometimes, there is a “view point” from which some of its main features can be seen. European travellers were very interested in panoramic views of cities as it is shown in this view of the city of Madrid, in Spain [Fig. 1]



Fig. 1. Segovia bridge as seen in a panel in “Madrid-Rio” park.

As explained by the text, Segovia bridge, built between 1574 and 1584 under the Spanish king Philip II and designed by architect Juan de Herrera, was then the main access to the city. Destroyed in the civil war (1936-1939) it was rebuilt in 1943, increasing its original width of 6,65 meters to 31 meters to allow motor vehicles traffic.

Understanding the complexity of the city “as architecture”, means not only to know its “visible image” but “its construction process along the time”. This was the purpose of the research of Aldo Rossi (1966) [2] as he studied different theories to approach the city, as a work of art as detailed by Lewis Mumford or from an economic point of view, as those of Maurice Halbwachs or Hans Bernouilli, to finally find an “irrational element of the growth of cities” that might have related to “the secret and irrepressible will of the collective manifestations”. He also points out that political institutions, representing people, configure the image of the city, through the elections done to transform its physical form. To present an approach to this “image of the city” of Madrid, is one of the purposes of this paper, hoping that its methodology could also be used to do the same with other towns.

## 2. Transformations of Madrid: rediscovering its urban facade

This part of the city was changed very much in the 20<sup>th</sup> century with the increasing of population of the 60's and 70's, as the river bed was nearly used as “open air sewerage”. As Professor Emilio Larrodera was explaining in his lectures on urban planning in the School of Architecture of Madrid Polytechnic University in the 80's “the city was turning its back to the river” with its planning. This was not only due to the lack of water in summer in Manzanares river; same thing was happening in other cities like Zaragoza, with one of the most important rivers of Spain like Ebro in the border of the historic setting of the town. Low income neighbourhoods were planned nearby and also the M-30 peripheral motorway around Madrid, very close to the river.

Many architects, such as Julio Cano Lasso [3] or Fernando Chueca Goitia [4] thought it was a strong damage for the city and its identity and wrote about it. They considered it as an “unrecoverable lost” as the costs of transforming it were very high, probably unaffordable. But the projects “Madrid Calle 30” (to bury the motorway; 2003-2007) and “Madrid-Rio” (to adapt the spaces above the tunnel; 2007-2011) did it: if we compare the detail of Julius Mülheuser view (c. 1650) as shown in the detail [Fig. 2] with a similar view of this area today [Fig. 3], we may appreciate we have recovered a part of this symbolic view of Madrid.



Fig. 2. Segovia bridge, detail of a panel in “Madrid-Rio” park.



Fig. 3. Segovia bridge, from “Madrid-Rio” park.



When the project to bury the motorway was presented by A. Ruiz Gallardón (then the mayor of Madrid, from PP), other political groups (PSOE and IU) were explaining that: “it is not related to the budget of the city as its cost of 4,382 million is almost the entire budget for one year” (Félix Arias, PSOE). Isabel Vilallonga (PSOE) went further: “Madrid is near the last positions in European levels of social health and elderly care. The works of the M-30 do not respond to any criteria of urgency, and the rush of the mayor is only due to his ‘egomania’”. IU spokeswoman, Inés Sabanés (IU) urged Ruiz Gallardón to “Explain to the citizens what it is hidden behind the insistent use of the so-called green surface in which, according to him, the M-30 will be transformed after the works”. Sabanés recalled that the project for Manzanares river “has not been submitted to public information nor has the corresponding permits from the Hydrographic Confederation and Heritage Conservation authority” [5].

But these short term economic criteria have been changed and, recently, Harvard University has given a price to this project, as reported in the same newspaper [6]. “The decision to award Madrid Río the Green Prize in Urban Design was motivated by the jury’s desire to highlight the potential for thoughtfully planned and carefully executed mobility infrastructures to transform a city and its region,” commented jury chair Rahul Mehrotra, Professor of Urban Design and Planning at Harvard GSD. “The extent to which the project harnesses the deployment of new infrastructures as an opportunity to repair and regenerate the city through carefully articulated design interventions is particularly valuable within the context of contemporary urbanization globally.” Jury Silvia Benedito comments: “I appreciate Madrid Río for what it does for the city and for the social body. I see it as the contemporary counterpart of the open space structure of the 19th-century Madrid’s El Retiro Park or Paseo del Prado. It embodies the optimistic idea that design can be a transformative force, acknowledging the plurality of the city, its many social and economic profiles, uses, velocities, time scales, and cycles. This project is part of a larger vision for the city that embraces culture, education, and well-being for its future restructuring. Located in an area that was historically the ‘back door’ of Madrid, where the population has been exposed to pollution and noise for many years, this park is designed to bridge communities, to be inclusive, non-hierarchical, informal, serving as a platform for various activities and healthier lifestyles. Madrid Río is an excellent example of how a reclaimed urban riverfront (once taken by traffic infrastructure) can be a catalyst for a better civic life, while integrating the micro-climatic potentials of the Manzanares River for Madrid’s urban environment.” [7].

### 3. Visibility: the image of the city

I agree with most of the precedent comments of Silvia Benedito but, as shown by the previous images [Fig. 1 to 3], this area of Madrid was - more accurately- the historically “front door” of the city. Heavily damaged by urban planning of the second part of 20th century, it has recovered what I consider an essential part of what a town should be in the beginning of 21st century: a “form” of the values its citizen share, understanding it as defined by Rudolf Arheim (1954):

“Form is the visible shape of content” wrote the painter Ben Shahn, and this is as good a formula as any to describe the distinction between shape and form I am observing in these chapters. Under the heading “Shape” I discussed some of the principles by which visual material, received by the eyes, organizes itself so it can be grasped by the human mind. Only for the sake of extrinsic analysis, however, can shape be separated from what it stands for. Whenever we perceive shape, consciously or unconsciously we take it to represent something, and thereby to be the form of a content.

Most practically, shape serves, first of all, to inform us about the nature of things through their external appearance. [...] Thus, a shape is never perceived as the form of just one particular thing, but always as that of a kind of thing. Shape is a concept in two different ways: first, because we see every shape as a *kind of shape*; second, because each kind of shape is seen as the form of whole kinds of objects.

In addition, form always goes beyond the practical function of things by finding in their shape the visual qualities of roundness or sharpness, strength or frailty, harmony or discord. It thereby reads them symbolically as images of the human condition. In fact, these purely visual qualities of appearance are the most powerful of all. It is they that reach us most directly and deeply”. [8]

How to approach the definition of this “form” of the city of Madrid, its “artistic spirit” linked to its historic urban façade? How to relate its architectonic features, its public and private spaces with the perception of values of its citizens? Is it possible? I tried to do it with the help of some of my students and colleagues of Polytechnic University.

The basis of the methodology to discover the meaning in what we see, to find the ideas expressed through images of the city, to awake “the inborn capacity to understand through the eyes” has being found in the recommendations of Rudolf Arheim (1954), of “handling pencils, brushes, chisels and perhaps cameras” [9]. With some of the international students coming to ETSEM-UPM courses, we have been using those methodologies for “creative thinking” about the city and its problems [10]. In the subject “History of the Urban Law and Planning of Madrid”, open also for Erasmus or international students, we have some “Walking in Madrid” lectures, one of which is about “Urban façades and their transformations: Madrid-Río Project”: we stroll from “San Antonio de la Florida” chapel, crossing Queen Victoria bridge, along the river bank to Kings gate and bridge, “Huerta de la Partida” Orchard and its view point, “Segovia” bridge, and “Virgen del Puerto” chapel. Students ask, comment and sometimes develop their work about what they have seeing. Some of their work conveys the “visibility” of the image of the city of Madrid.

The perception of the historic city centre is not only easier to discover for foreign visitors, for members of an international prize jury (as Silvia Benedito comments), but also for inhabitants of the neighbourhoods near the river. We may think of an achieved utopia [Fig. 4]:



Fig. 4. Madrid's historic urban façade, from “Huerta de La Partida” Viewpoint.

#### 4. Results and Discussions: Sustainability

UNESCO recommendation (2011) on “Historic Urban Landscape”: it “is an additional tool to integrate policies and practices of conservation of the built environment into the wider goals of urban development in respect of the inherited values and traditions of different cultural contexts”. It may include the following:

- “To undertake comprehensive surveys and mapping of the city’s natural, cultural and human resources;
- To reach consensus using participatory planning and stakeholder consultations on what values to protect for transmission to future generations and to determine the attributes that carry these values;
- To assess vulnerability of these attributes to socio-economic stresses and impacts of climate change;

- To integrate urban heritage values and their vulnerability status into a wider framework of city development, which shall provide indications of areas of heritage sensitivity that require careful attention to planning, design and implementation of development projects;
- To prioritize actions for conservation and development;
- To establish the appropriate partnerships and local management frameworks for each of the identified projects for conservation and development, as well as to develop mechanisms for the coordination of the various activities between different actors, both public and private.” [11]

Vulnerability of the “historic urban façade” of Madrid is still there, as we see the crane near “Almudena” cathedral. If we look at the elevation drawings done by Julio Cano Lasso for his utopia for Madrid [12], we might see that part of it has become a reality. But...Should the Museum of Royal Collections have this volume? Should consultations about it being done to citizens of Madrid, showing how it looks like before the building being erected? Reality is that this had not been done.

Le Corbusier (1925) was already answering this questions in the chapters of his book dealing with sustainability (“Pérennité”) or ranking and selection (“Classement et choix”) [13]: “Form problem to be established in the program of the council: all decisions to be adopted related to forbid bad form and to look for good forms”. Same recommendations, even more detailed, established by Kevin Lynch (1981) about “Good city form” [14].

## 5. Conclusions

When considering projects that can transform “historic urban facades”, a study of aspects not related with technical requirements should be evaluated, according to impact on the vision of the city. Modern opportunities given by technology can be used to allow a wider participation of its inhabitants in that kind of decisions. The result being something which is further than just economic, social o environmental considerations, something related to the “Spirit of the city” and the possibility its citizens have to establish a connection with their own community.

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